



AIR FORCE GLOBAL STRIKE COMMAND

INNOVATION & TECHNOLOGY SYMPOSIUM



Breaking Barriers and Leading Change...Strategic Deterrence and Global Strike in the 21st Century

November 13 – 15, 2017

Shreveport Convention Center

Shreveport, LA



MONDAY, NOVEMBER 13

12:00 – 8:30 pm

SYMPOSIUM AND EXPO REGISTRATION OPEN

6:00 – 7:00 pm

TROPHY RETURN

Exhibit Hall 2

6:30 – 8:30 pm

NDIA GLOBAL STRIKE EXPO OPEN

7:00 – 8:30 pm

GRAND OPENING OF THE NDIA GLOBAL STRIKE EXPO & NETWORKING RECEPTION

TUESDAY, NOVEMBER 14

7:00 am – 6:30 pm

SYMPOSIUM AND EXPO REGISTRATION OPEN

7:00 – 8:00 am

NETWORKING CONTINENTAL BREAKFAST

8:00 – 8:45 am

WELCOMING REMARKS

General Hawk Carlisle, USAF (Ret)

President & CEO, NDIA

General Robin Rand, USAF

Commander, Air Force Global Strike Command

8:45 – 9:30 am

KEYNOTE PRESENTATION ON BREAKING BARRIERS

Brigadier General Kristin E. Goodwin, USAF

Commandant of Cadets, USAF Academy

9:30 am – 6:30 pm

NDIA GLOBAL STRIKE EXPO OPEN

Hall 1

9:30 – 10:00 am

NETWORKING BREAK

Expo Hall

10:00 – 11:00 am

INDUSTRY SENIOR EXECUTIVE PANEL

Lieutenant General Noel T. “Tom” Jones, USAF (Ret)

Moderator

Ms. Carol Erikson

Vice President, GBSD, Space Systems Division, Northrop Grumman Aerospace Systems

Mr. Alan Jackson

Vice President, Strike Systems, Lockheed Martin Missiles and Fire Control

Major General Tony Przybyslowski, USAF (Ret), Vice President and Executive Director, Global Sales and Marketing, Boeing Defense, Space & Security

11:00 am – 12:25 pm

NETWORKING LUNCH WITH PRESENTATION ON BOMBER HERITAGE

Major General Garrett Harencak, USAF

Commander, Air Force Recruiting Service

12:30 – 1:10 pm

CONCURRENT BREAKOUT SESSIONS

Airman Panel – Inspire

Character In Action

Airmen carry out the Air Force mission every day. Each new generation of Airmen brings new perspectives and ideas into the Air Force. They are also a reflection of the social and technological changes that may have occurred within American society and therefore may have different expectations, motivations and values from the generation before them.

Chief Master Sergeant

Angelique McDonald, USAF

AFGSC/PA

Moderator

Senior Airman Melanie Martine, USAF

2 CES

Senior Airman Eric Kimble, USAF

608 COMS (Barksdale)

Senior Airman Jessica Ortiz-Villa, USAF

341 SSPTS

Senior Airman Amy Cure, USAF

341 MSFS

Senior Airman Kaitlyn Callahan, USAF

342 MDG

Non Commissioned Officer

Panel – Growing Leadership

In The Mid-Level To Meet

Changing Demands

SNCO's represent a significant portion of the Air Force's leaders serving as front-line supervisors, program managers, Section and Flight Chiefs and more. They are often have to navigate the through the intersection of the problems their Airmen face while still ensuring Air Force policy and Senior Leader guidance is met.

Chief Master Sergeant Kim Castro, USAF

B2 BW Wing Weapons Manager

Moderator

Senior Master Sergeant Dustin Prowell, USAF

377 MSG/CED

Senior Master Sergeant Lyndsey Fry, USAF

608 AOC (Barksdale)

Technical Sergeant Jason Bierman, USAF

341 CES

Staff Sergeant Philip Giovanniello, USAF

7 SFS

Company Grade Officer

Panel – Connecting Cgos

With Leaders To Adapt The

Air Force With The Ever

Changing World

CGOs are the future leaders of the Air Force. They lead enlisted Airmen and interact with leaders at the squadron, group and wing. They feel the effects of decisions of senior leaders on their ability to meet the mission. CGOs have experience in the Air Force, but are still new enough to generate non-traditional ideas on how the Air Force could operate.

Colonel Dede Halfhill, USAF

Moderator

Captain Shane Veitenheimer, USAF

509 CES

Captain Jennifer Young, USAF

2FSS

Captain Joshua Haynes, USAF

91 MW; 791 MXS

Lieutenant Michelle Governor, USAF

341 MW; 10 MS

1:10 – 1:120 pm

NETWORKING BREAK

1:20 - 2:00 pm

CONCURRENT BREAKOUT SESSIONS – REPEAT

2:00 – 2:30 pm

NETWORKING BREAK

Expo Hall

2:30 – 3:30 pm

CONCURRENT BREAKOUT SESSIONS

WING COMMANDER PANEL
- INCREASING MISSION

EFFECTIVENESS IN
CONSTRAINED ENVIRONMENTS

The Air Force is stretched between the culmination of reductions in end strength numbers, ops requirements and the increasing financial strain of maintaining the current infrastructure while needing to modernize its weapon systems. Wing Commanders must deal with these realities while still being called upon to improve the effectiveness of their organizations and absorb additional mission requirements.

Mr. Mike Morgan

Executive Director, Air Force Global Strike Command Operations and Communications, Barksdale Air Force Base, Louisiana
Moderator

Colonel Matthew Brooks, USAF

Commander, 5th Bomber Wing, Minot Air Force Base, North Dakota

Colonel Brandon Parker, USAF

Commander, 7th Bomber Wing, Dyess Air Force Base, Texas

Colonel Stacy Jo Huser, USAF

Commander, 90th Missile Wing, F.E. Warren Air Force Base, Wyoming

Colonel Rick Gibbs, USAF

Commander, 377th Air Base Wing, Kirtland Air Force Base, New Mexico

SQUADRON CC PANEL –
REVITALIZING THE SQUADRON
IN A CONSTRAINED
ENVIRONMENT

The CSAF has made revitalizing the squadron a chief priority for the Air Force. Squadron Commanders will be key to affecting change and ensuring enduring implementation. However, they need to accomplish while operating through the results of end strength reductions, increasing ops requirements and a strained fiscal budget.

Colonel Kelvin Townsend, USAF
Moderator

Lieutenant Colonel Jade Reidy,
USAF
7 OSS/CC

Major Kristen Shadden, USAF
5 AMXS/CC

Lieutenant Colonel Stephanie
Wilson, USAF
90 MMXS/CC

Major Marc Ortiz, USAF
341 SFS/CC

COMMAND CHIEFS PANEL –
GROWING OUR AIRMEN TO MEET
GROWING MISSION SETS

Command Chiefs are the senior enlisted leaders responsible for the health, morale, and welfare of the command’s enlisted Airmen. They ensure the Airmen are trained and prepared to accomplish the mission despite challenges in end strength numbers, increasing ops requirements, limited budget and strained infrastructures.

Chief Master Sergeant Thomas
Good, USAF
20 AF/CCC
Moderator

Chief Master Sergeant Paul Elliott,
USAF
5 AF/CCC

Chief Master Sergeant Amber
Mitchell, USAF
341 MW/CCC

Chief Master Sergeant John Burks,
USAF
91 MW/CCC

Chief Master Sergeant Chad
Schulte, USAF
377 ABW/CCC

3:30 – 4:15 pm

KEYNOTE PRESENTATION ON THE EUROPEAN PERSPECTIVE

Lieutenant General Richard M. Clark, USAF
Commander, 3rd Air Force

4:15 – 4:30 pm

CLOSING REMARKS

Captain Frank Michael, USN (Ret)

Senior Vice President, Program Development, NDIA

4:30 – 6:30 pm

RECEPTION

Expo Hall

WEDNESDAY, NOVEMBER 15

7:00 am – 4:00 pm

SYMPOSIUM AND EXPO REGISTRATION OPEN

7:00 – 8:00 am

NETWORKING CONTINENTAL BREAKFAST

8:00 – 8:15 am

OPENING REMARKS

Captain Frank Michael, USN (Ret)

Senior Vice President, Program Development, NDIA

General Robin Rand, USAF

Commander, Air Force Global Strike Command

8:15 – 8:55 am

KEYNOTE PRESENTATION ON LEADERSHIP

Command Sergeant Major Patrick Z. Alston, USA (Ret)

Former Command Senior Enlisted Leader (USSTRATCOM)

9:00 – 10:00 am

CONCURRENT BREAKOUT SESSIONS

Hypersonic Vehicles – OPEN TO U.S. ATTENDEES ONLY

Participate in a discussion on hypersonic technology as a national imperative and what are government, industry and academia doing to accelerate this capability

Major General Dave Scott, USAF (Ret)

Vice President, Business Development, Raytheon
Moderator

Lieutenant Colonel Dustin D. Harmon, USAF

Deputy Chief, Weapons Requirements Division HAF/A5RW

Mr. Robert B. Addis

Defense Technologies Engineering Division, Lawrence Livermore National Laboratory

Mr. Brent Peavy

Principal Research Engineer, Georgia Tech Research Institute

Mr. Daniel M. Norton

Senior Management Systems Analyst, RAND Corporation

Air Force Research Laboratory Representative

Counter UAV – OPEN TO U.S. ATTENDEES ONLY

Hear from experts on the technologies that the U.S. is developing to counter UAV challenges in the detection, engagement, and swarming areas.

Lieutenant General Noel T. “Tom” Jones, USAF (Ret)

Moderator

Lieutenant General Richard M. Clark, USAF

Commander, 3rd Air Force

Mr. Jerry Coburn

Director, Business Development, Electronic Warfare and Range Instrumentation (EWR), Sierra Nevada Corporation

Mr. Garry Shackley

Principal Engineer, Cyber Solutions Group, Radiance Technologies Inc.

University Based Innovation

Dr. Rodney Miller

Chief Scientist, Air Force Global Strike Command
Moderator

Dr. Elizabeth Cantwell

Vice President for Research Development, Arizona State University

Dr. Tomás Díaz de la Rubia

Chief Scientist, Executive Director, Discovery Park, Purdue University

Dr. Leslie K. Guice

President, Louisiana Tech University

9:30 am – 3:00 pm

NDIA GLOBAL STRIKE EXPO OPEN

Hall 1

10:00 – 10:30 am

NETWORKING BREAK

Expo Hall

10:30 – 11:15 am

KEYNOTE PRESENTATION ON WARRIOR ETHOS

Chief Master Sergeant Gerardo Tapia, USAF (Ret)

Command Chief Master Sergeant, Headquarters Air Education and Training Command

11:15 am – 12:25 pm

NETWORKING LUNCH WITH PRESENTATION ON ICBM HERITAGE

Major General Roger W. Burg, USAF (Ret)

12:30 – 1:25 pm

KEYNOTE PRESENTATION ON NEXTTECH: THE FUTURE OF TECH AND SECURITY

Dr. Peter Singer
Strategist, New America

1:30 – 2:30 pm

CONCURRENT BREAKOUT SESSIONS

Geopolitical Threat Overview

Participate in a discussion focusing on the pressing geopolitical threats facing the U.S. today and hear from key thought leaders on the U.S. strategy to mitigate these threats.

General Hawk Carlisle, USAF (Ret)
President & CEO, NDIA
Moderator

Dr. David Fahrenkrug
Director, Strategic Planning, Northrop Grumman Analysis Center

Dr. Carl Rhodes
Director, Force Modernization and Employment Program, RAND Project Air Force

Mr. Curtis McGiffin
Adjunct Professor, Department of Defense and Strategic Studies, Missouri State University

Blue Force Tracking Systems

Hear from experts on innovative blue force tracing technologies and how these capabilities provide the U.S. military with real-time situational awareness.

Col Chris Pehrson, USAF (Ret)
Vice President, Strategic Development, General Atomics Aeronautical Systems
Moderator

Mr. Kirt S. Moser
Deputy Director, Air Force Research Laboratory Center for Rapid Innovation

Disruptive S&T

Learn about cutting-edge technologies and capabilities that are sustainable and can be readily modernized.

Mr. James Chew
Group Director, National Security, Cadence
Moderator

Mr. Brandon Smith,
Office of the Secretary of Defense (OASD-R&E), Defense MicroElectronics Activity (DMEA)

Dr. Kevin Geiss, SES, USAF
AFMC 711 HPW/RH

Dr. Adedeji B. Badiru, SES
Dean, Graduate School of Engineering and Management, Air Force Institute of Technology

2:30 – 3:00 pm

NETWORKING BREAK

Expo Hall

3:00 pm

CLOSING OF THE NDIA GLOBAL STRIKE EXPO

2:45 – 3:00 pm

SPEAKER INTRODUCTION

Governor John Bel Edwards

Governor, State of Louisiana

3:00 – 3:45 pm

KEYNOTE PRESENTATION

Secretary Heather Wilson

Secretary, U.S. Air Force (Invited)

3:45 – 4:00 pm

CLOSING REMARKS

General Robin Rand, USAF

Commander, Air Force Global Strike Command

4:00 pm

BUS DEPARTURE FOR SCORE POSTING

No Federal endorsement of NDIA implied or intended.



Air Force Institute of Technology



3D Printing R & D at AFIT: - Advances and Impacts on Acquisition Programs



Dr. Adedeji B. Badiru
AFIT Graduate School of Engineering & Management

Air Force Global Strike Command Innovation & Technology Symposium
13-15 November 2017
Shreveport Convention Center



AFIT: The future of Airpower starts here!



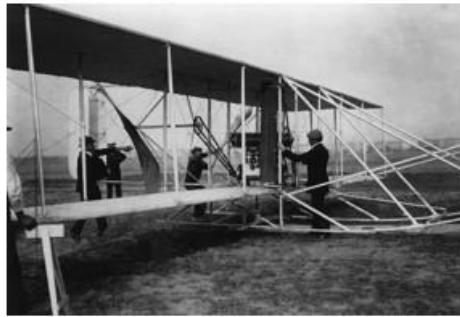


Wright-Patterson AFB



The Air Force Center for Innovation!

AF Life Cycle
Management Center



National Air & Space
Intelligence Center



HQ AF Materiel Command

AF Research Laboratory



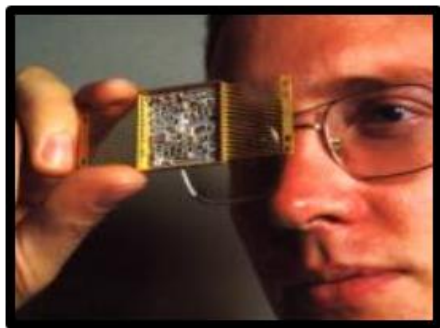
AF Institute of Technology

88th Air Base Wing



AFIT: The future of Airpower starts here!





AFIT RESEARCH & EDUCATION



AFIT: The future of Airpower starts here!





Mission



We help build America's airpower, by educating military and civilian Airmen to innovatively accomplish the Air Force's core missions, in support of joint, combined and coalition operations worldwide, more effectively, efficiently, sustainably and affordably.



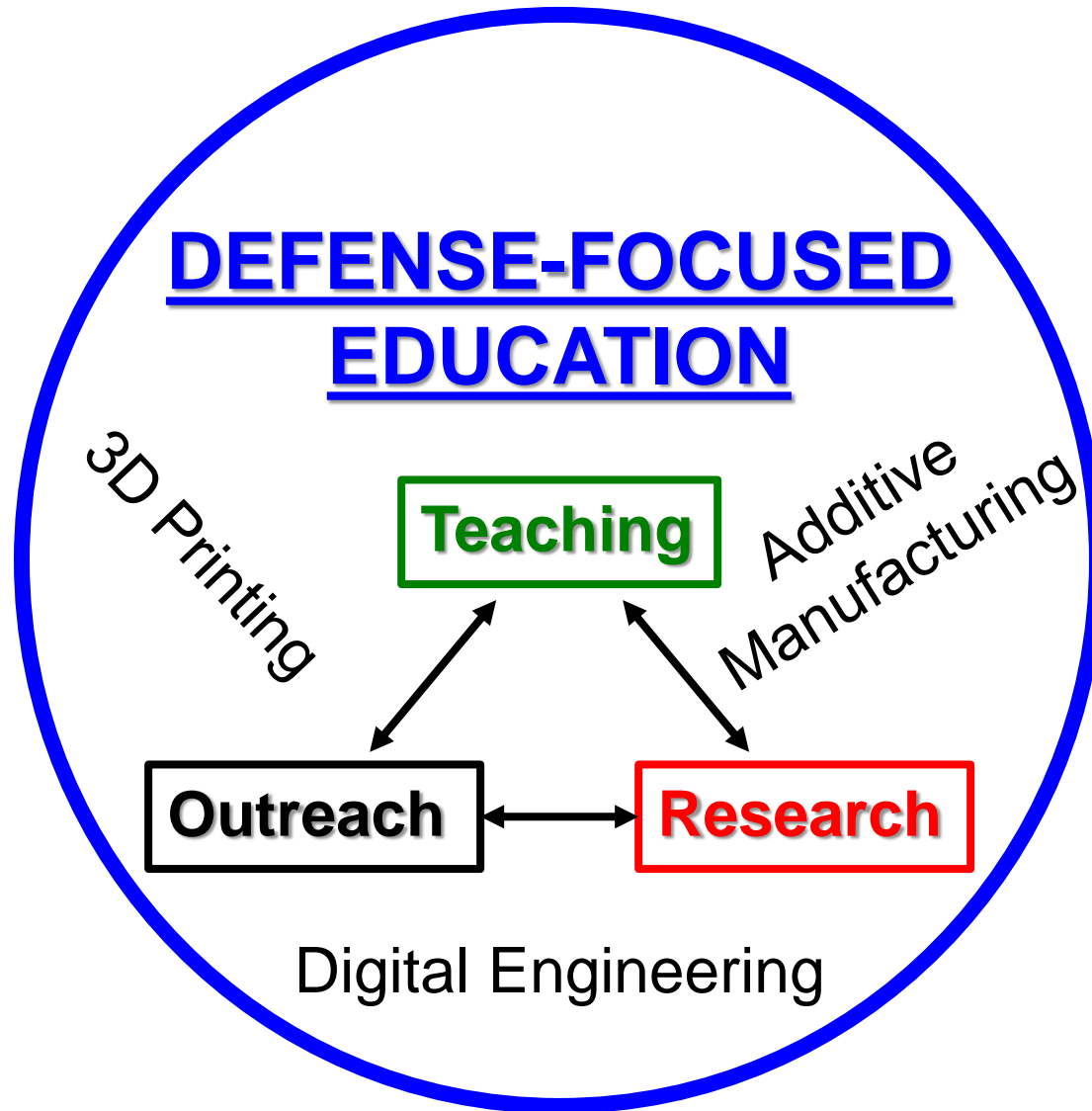


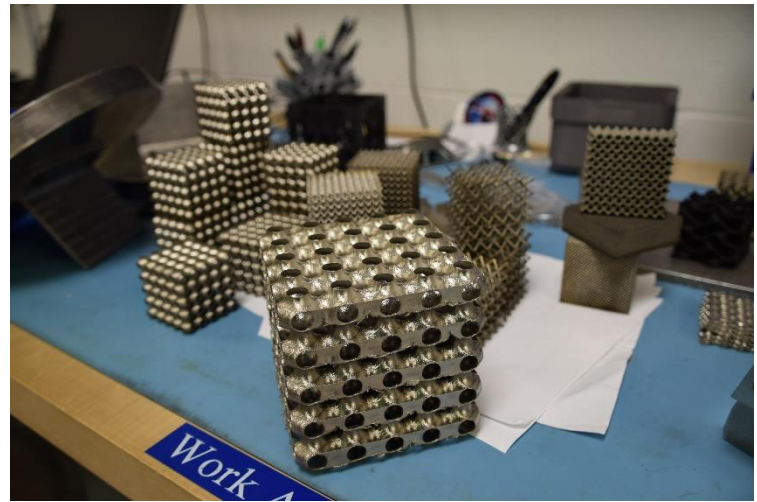
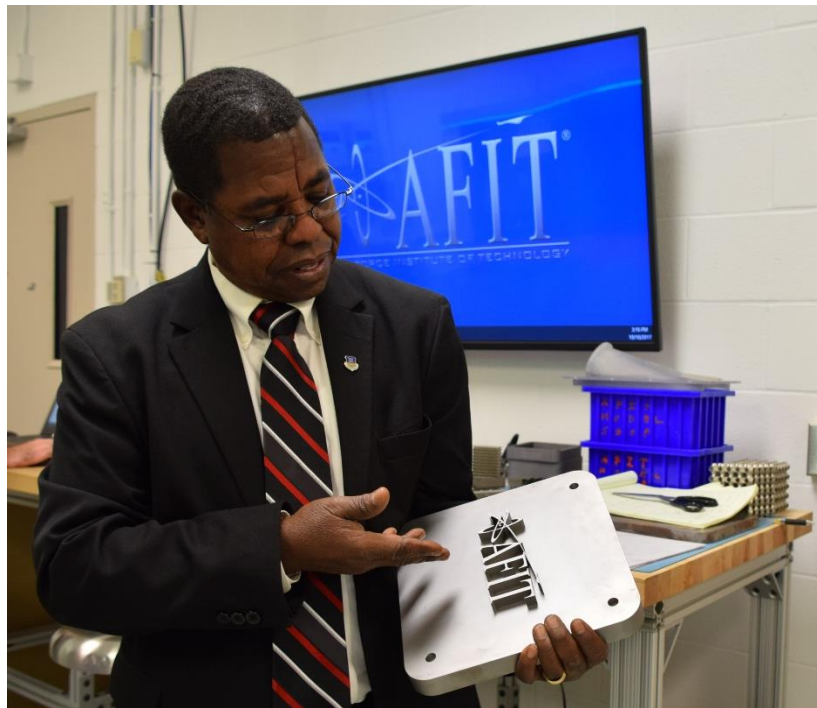
Execution of the Mission



Provide unique defense-focused, research-enabled, multi-disciplinary advanced academic education, as well as globally-delivered, career-long, functional professional continuing education, over a continuum of learning, on-command and on-demand.







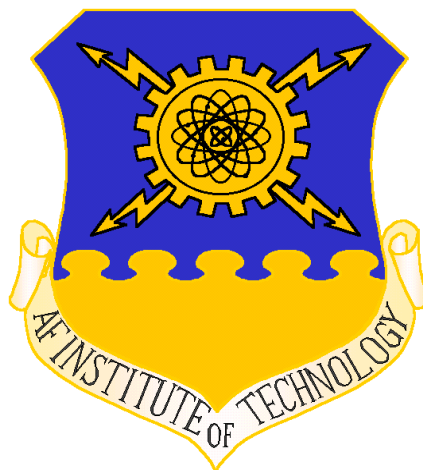
On-Demand Acquisition Possibilities
- Faster Innovation Pathways





Thank You!

Questions & Discussions



AFIT: The future of Airpower starts here!

THINK DIFFERENT:

**Using the "New Normal" For Global Strike Systems Development,
Sustainment, and Modernization**

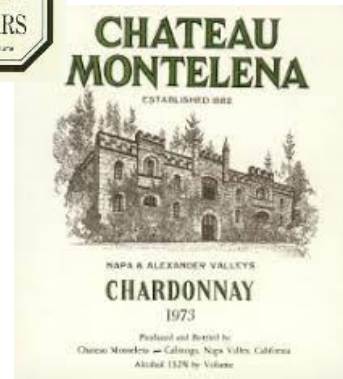
James S.B. Chew

**Chair, NDIA Science and Engineering
Technology Division**

Group Director, Cadence Design System

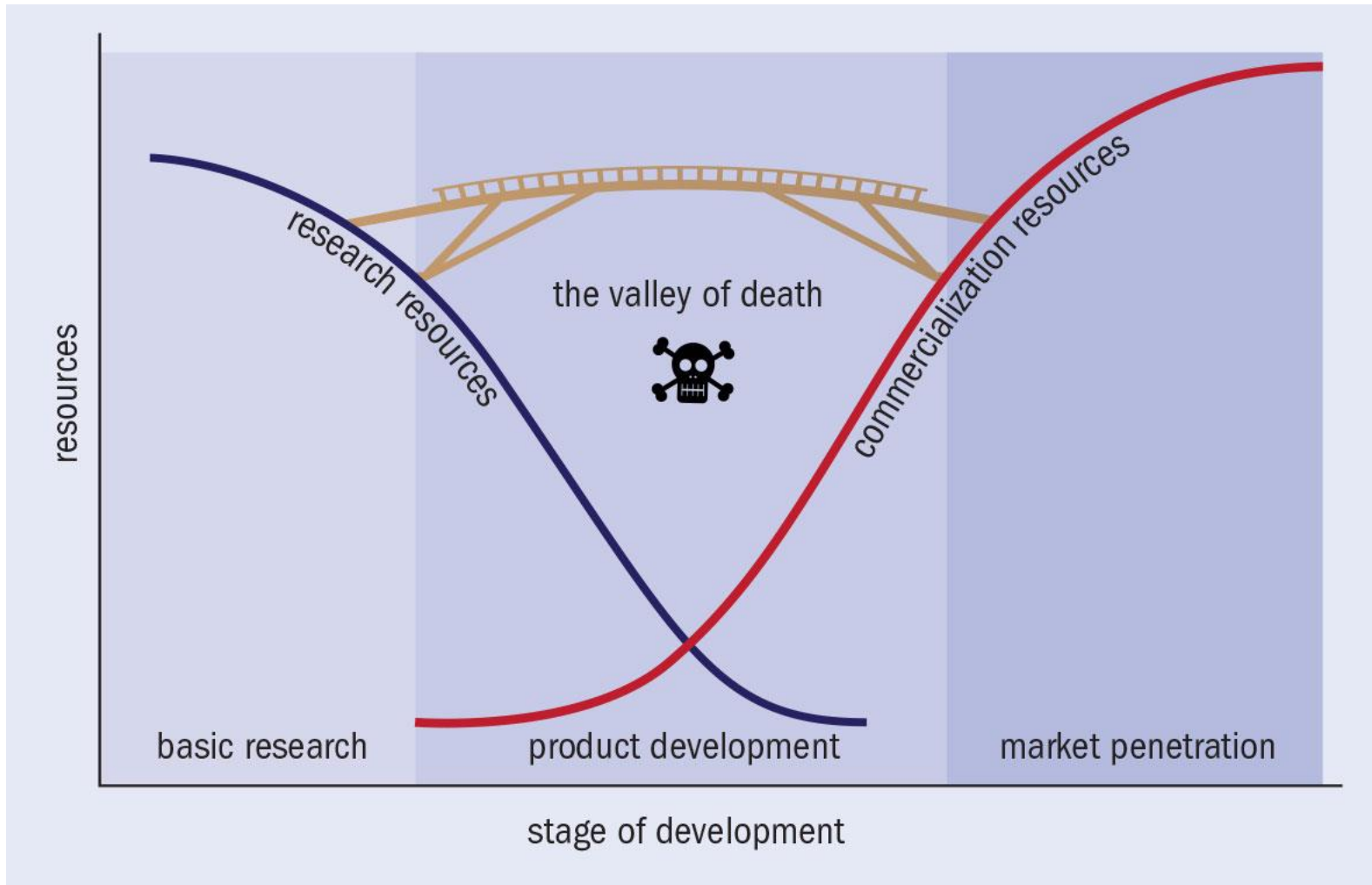
Examples of Market Disruption

NDIA



What Do All These Have In Common?

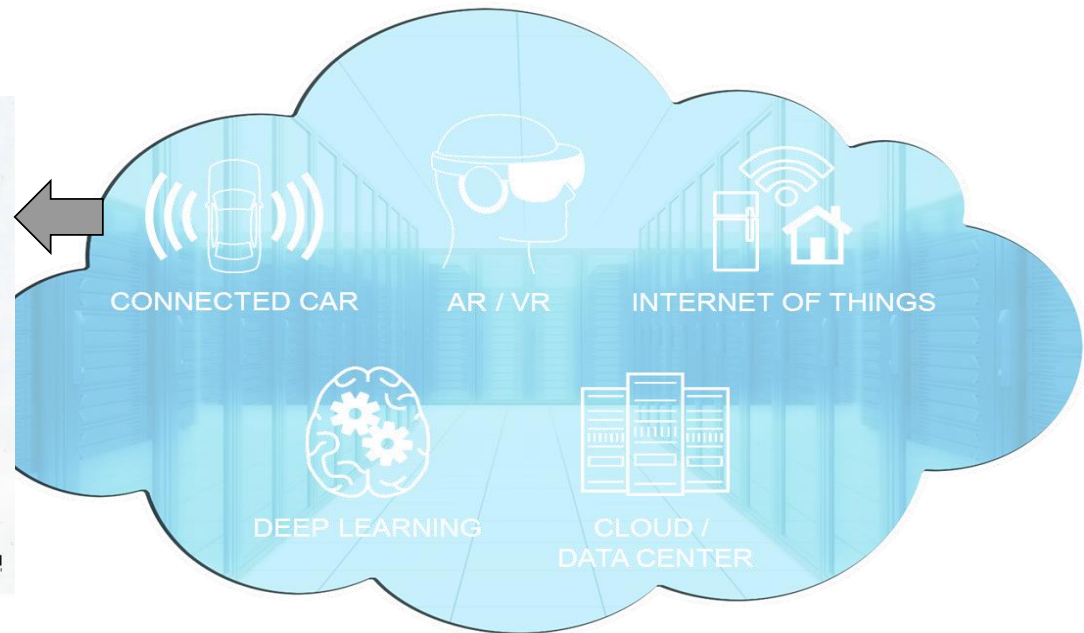
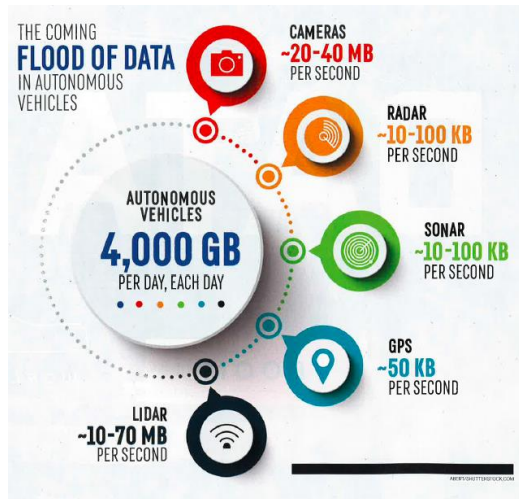
The Myth Of The Valley Of Death



It's Market Driven

Commercial Technology Leverage

Where We're Going: Emerging Market Technology Trends



Projected Double Digit CAGRs over Next Five Years

DoD Human Factors S&T Focus: Dr. Kevin Giess

NDIA



Defense Microelectronics Activity (DMEA)

Mr. Brandon Smith

NDIA



Bridging Technology Valley of Death



Air Force Institute of Technology 3D Printing

Dean Adedeji Badiru

NDIA



The 12 Steps to Innovation and Disruption **NDIA**

- Admit you don't know everything
- *Learn and understand your real business*
- Look at other industries, markets, and other types of companies for ideas and inspiration
- *Seek out your real customers, listen to them, be in their shoes*
- Question the Status Quo (Ask Why?)
- *Ignore the Guardians of the Status Quo*
- Be wary of “the expert”
- *Be willing to change the way you do things (Ask why not?)*
- Be honest
- *Be brave*
- Use technology to innovate and disrupt, not replace
- *Just do it – its always easier to beg for forgiveness than ask for permission*

Back to Basics:

A Bomber Airman's Perspective from Europe



Lt Gen Richard M. Clark
3 AF/CC



Unclassified



LIFE



LIEUT. GENERAL EAKER
EIGHTH AIR FORCE

NOVEMBER 29, 1943 **10** CENTS
YEARLY SUBSCRIPTION \$4.50

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Unclassified

I.C. 20.79934





Unclassified





Unclassified



2Lt Walter Truemper

SSgt Archibald Mathies









© picture alliance/Newscom/U.S. Air Force/Senior Airman Erin Babis













QUESTIONS?





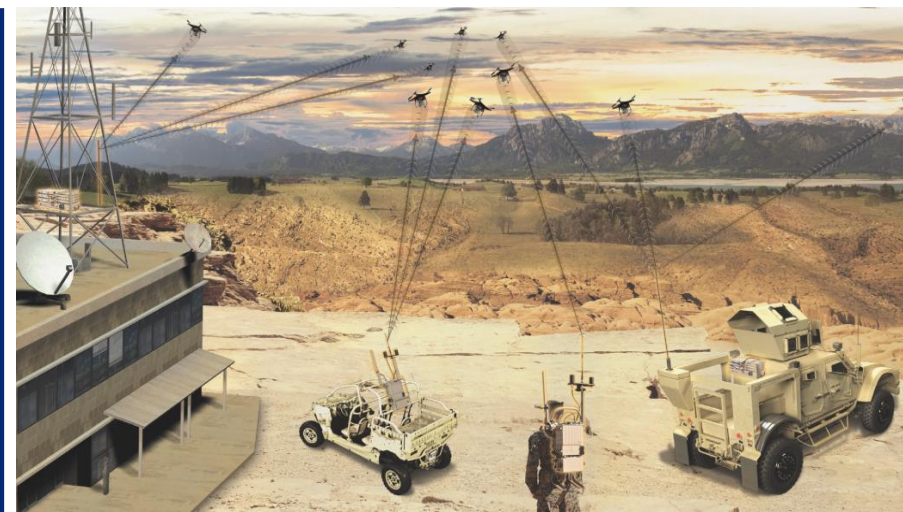
Counter UAS Capability

Jerry Coburn -- November 2017

SkyCAP – SNC's Counter UAS System

Dismounted:

- CUAS & RCIED force protection in austere environments
- User-selectable load set provides on-the-fly adaptability to changing threat environments
- Rapidly programmable to maintain effectiveness against new & evolving threats
- Omni & directional antenna configurations available to meet multiple mission profiles



Mobile:

- Scalable solutions for light, medium & heavy tactical vehicles
- Provides autonomous protection as a stand-alone system against UAS threats & IEDs
- Fully integrated with radar, EO/IR sensor & C2/GUI solutions on customer tactical vehicle platforms



Fixed-Site:

- Fully integrated with multiple radar & EO/IR sensors for single user interface
- RF environment sensing feeds Joint Engagement Sequence & Operator with advance threat alerts
- User-selectable omni & directional antenna arrays to address various threat profiles from single UAS threats to swarms
- Network-capable for single interface control of multiple systems

Industry Observations on Joint Service Capability CUAS Development

Threat Intelligence:

- *Single most important aspect of defining defeat solutions & capability*
- Requires commercial UAS technology market trends combined with technical exploitation
- Determines pace of defeat tools & techniques development
- Currently no single DOD organization tasked with developing, maintaining & providing access to a database...Several appropriate candidates

Demonstration & Test Events:

- No existent Joint Test Protocol for CUAS testing
- Variation between Service-specific testing and Joint Exercise venues:
 - ☐ Threat types & prioritization
 - ☐ Specific threat configurations (aircraft & C2)
 - ☐ Flight profiles & geometry
 - ☐ Electromagnetic environment
 - ☐ Qualitative vs. Quantitative
- End User involvement/participation/performance requirements

Considerations for Compatibility & Operational Feasibility (i.e. CONOP):

- Three essential operational environments:
 - ☐ Static or Fixed-site
 - ☐ Mobile platform
 - ☐ Dismount / Austere environment
- Automated vs. Man-in-loop:
 - ☐ Clearance procedures for kinetic & non-kinetic effects, multi-layered vs. single system
 - ☐ Mission & environment dictated
 - ☐ Sub-system dependence & engagement TTPs impact on cycle time of engagement (non-kinetic vs kinetic)
 - ☐ Electronic platform protection across multiple threat categories (CIED, CUAS, Counter C2, etc.)



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